

REPORT ON THE MYCOLOGICAL DIAGNOSTIC SERVICE, ROYAL VICTORIA HOSPITAL, 1959

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IN March, 1959, the Belfast Hospitals Management Committee appointed a full-time research mycologist to the Royal Victoria Hospital. In addition to research on various aspects of human mycoses, a routine diagnostic service was

TABLE I.
SOURCES OF PATHOLOGICAL SPECIMENS AND NUMBER OF SAMPLES
CONTAINING PATHOGENIC FUNGI.

HOSPITAL	NUMBER OF SAMPLES	NUMBER YIELDING PATHOGENIC FUNGI
Ards - - -	17 ...	3
Armagh - - -	1 ...	0
Banbridge - - -	4 ...	0
Belfast City Hospital - - -	79 ...	22 (incl. 2 microscopy alone)
Bush House - - -	1 ...	0
Coleraine - - -	13 ...	4
Daisy Hill - - -	5 ...	4
Derry - - -	21 ...	7 (2 by microscopy alone)
Downe - - -	3 ...	0
Lagan Valley - - -	3 ...	2
Lissue House - - -	10 ...	4
Lurgan and Portadown - - -	12 ...	4
Mid-Ulster - - -	4 ...	1
Moyle - - -	9 ...	2
Musgrave Park - - -	1 ...	1
Route - - -	14 ...	5
Royal Belfast Hospital for Sick Children - - -	478 ...	243 (29 by microscopy alone)
Royal Victoria Hospital - - -	336 ...	107 (15 by microscopy alone)
Tyrone - - -	13 ...	3
Ulster Hospital for Children and Women - - -	7 ...	2 (1 by microscopy alone)
Waveney - - -	18 ...	3
Private patients (not seen in hospitals) - - -	38 ...	20 (2 by microscopy alone)
TOTAL - - -	1,087	437 (51 by microscopy alone)

established for the mycological examination of pathological material and the detection and identification of pathogenic fungi. This report deals with the specimens received for analysis and the mycological findings during the period March, 1959, to 31st December, 1959. During this ten-month period 1,087 samples from 627 patients were received from twenty-one hospitals in Northern Ireland. The number of specimens received and the number yielding pathogenic fungi is shown in Table I.

RINGWORM.

The most common pathogens were the ringworm fungi which accounted for 318 (82.8 per cent.) of the total number of pathogenic organisms obtained in culture. This total did not represent an equivalent number of cases, however, as material from many infected patients was removed at frequent intervals to determine the course of infection following griseofulvin therapy. The actual number of cases of ringworm was 179, of which ten species of ringworm fungi were implicated. Table II shows the species recorded and the type of infection from which they were isolated.

In addition to the 1,087 specimens received from hospital and other patients, 1,051 samples from various sources were examined in connection with an outbreak of *T. sulphureum* infection at a Belfast residential school for girls. In the course of these studies the pathogen was isolated on ninety-four occasions, but full details of clinical and mycological findings will be published elsewhere (Mackenzie, Burrows, and Walby, 1960).

Beare (1958) has reported that *T. sulphureum* is the most common cause of scalp ringworm amongst children in Northern Ireland, and the results obtained during the first ten months of the diagnostic service would seem to confirm his observation. It must be pointed out, however, that the high number of *T. sulphureum* scalp infections obtained in 1959 was maintained largely by the single outbreak mentioned above, in which nineteen children were found to be infected. It must also be pointed out that the numbers of cases of specific mycotic infections recorded in the present communication do not necessarily indicate their relative incidence. Comparisons and conclusions cannot be made from the data in Table II, which represents no more than the numbers of isolates made at the laboratory. Table III shows the number of specimens examined for each of the sources listed in Table II.

Although conclusions cannot be drawn from a series of unrelated observations, it is nevertheless clear that only three species of ringworm fungi are common, viz., *T. sulphureum*, *M. canis*, and *T. verrucosum*. *T. rubrum* was isolated on several occasions, and this may suggest that it is no longer a rare dermatophyte in Northern Ireland. *M. gypseum* and *T. megnini* are uncommon pathogens, but both have been previously reported from Northern Ireland. On the other hand, *T. quinckeanum* has not been reported until now, and this is therefore a new record for Northern Ireland. It was obtained from a scalp lesion on a two-year-old Belfast girl, and was treated satisfactorily with griseofulvin therapy (750 mgm. daily). The pathogen can usually be traced to an animal source, particularly to mice, although cats or other domestic animals may be the agents of spread.

TABLE II.
SPECIES OF RINGWORM FUNGI AND THEIR ORIGIN.

SPECIES	CHILD	SCALP		BODY		HAND		FOOT		GROIN		NAIL		CHIN		TOTAL NO. POSITIVES		TOTAL
	ADULT	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Trichophyton sulphureum	Child Adult	6 —	25 1	3 1	10 —	— —	— 1	— —	— —	— —	— —	— —	1 —	— —	— —	9 1	36 2	48
Microsporum canis	Child Adult	13 —	8 —	6 1	8 6	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	19 1	16 6	42
Trichophyton verrucosum	Child Adult	7 4	3 3	6 9	2 3	— —	— —	— —	— —	— —	— —	— —	— —	— 3	— —	13 16	5 6	40
Trichophyton rubrum	Child Adult	— —	— —	— 2	— 1	— 1	— —	— 10	— 1	— —	— —	— 1	— 2	— —	— —	— 15	— 4	19
Trichophyton mentagrophytes	Child Adult	2 1	— 1	— 4	— 1	— 1	— 1	— —	— —	— —	— —	— —	— —	— —	— —	2 6	— 3	11
Trichophyton interdigitale	Child Adult	— —	— —	— —	— —	— —	— —	— 8	— 2	— —	— —	— —	— —	— —	— —	— 8	— 2	10
Epidermophyton floccosum	Child Adult	— —	— —	1 1	— 1	— —	— —	— 5	— 1	— 3	— —	— —	— —	— —	— —	1 9	— 2	12
Microsporum gypseum	Child Adult	— —	— —	— —	1 —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	1 —	1
Trichophyton quinckeanum	Child Adult	— —	1 —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	1 —	1
Trichophyton megnini	Child Adult	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— 1	— —	— 1	— —	1
TOTALS -	Child Adult	28 5	37 5	16 18	21 12	— 2	— 2	— 23	— 4	— 4	— —	— 1	1 2	— 4	— —	44 57	59 25	185

NOTE: (1) A "child" is an individual up to but not including the age of 16 years.

(2) "M" and "F" refer to male and female respectively.

In this case, the infection is thought to have been acquired from a young cat, although confirmation was not possible.

OTHER PATHOGENIC FUNGI.

Candida albicans was isolated on thirty-five occasions from a number of sources, the majority being from the perineum, groins, or the interdigital spaces of the feet.

Other yeast-like fungi included *C. parapsilosis*, *C. tropicalis*, *Torulopsis glabrata*, and *Pityrosporum ovale*. *Malassezia* (microsporon) *furfur*, the cause of pityriasis versicolor, was recorded on seven occasions. *Aspergillus niger* was isolated on one occasion from an otomycosis. *Scopulariopsis brevicaulis*, an organism of uncertain pathogenic status, was isolated from a dystrophic toenail.

TABLE III.
NUMBERS OF SPECIMENS EXAMINED.

SOURCE	CHILDREN	ADULTS	TOTAL
Scalp - - -	324 ...	31 ...	355
Body - - -	147 ...	159 ...	306
Hand - - -	5 ...	91 ...	96
Foot - - -	6 ...	209 ...	215
Groin - - -	2 ...	21 ...	23
Nail - - -	7 ...	43 ...	50
Chin - - -	- ...	14 ...	14
Perineum - - -	- ...	22 ...	22
Ear - - -	- ...	2 ...	2
Mouth - - -	- ...	4 ...	4
TOTAL - - -	491 ...	596 ...	1,087

REFERENCES.

- BEARE, J. M. (1958). *Mycopathologia*, 9, 65.
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